



# Bureau of Fire Services

## MARIJUANA UNIT



# Bureau of Fire Services Marijuana Unit

- Brian Williams: [WilliamsB@Michigan.gov](mailto:WilliamsB@Michigan.gov) (Program Manager)
- John Hager: [HagerJ@Michigan.gov](mailto:HagerJ@Michigan.gov) (Inspector)
- Paul Dove: [DoveP1@Michigan.gov](mailto:DoveP1@Michigan.gov) (Inspector)
- James Bradford: [BradfordJ@Michigan.gov](mailto:BradfordJ@Michigan.gov) (Inspector)
- Melissa Bodnar-Brazil: [BodnarM1@Michigan.gov](mailto:BodnarM1@Michigan.gov) (Inspector)
- Ron Rybak: [RybakR@Michigan.gov](mailto:RybakR@Michigan.gov) (Inspector)
- Don Carter: [CarterD25@Michigan.gov](mailto:CarterD25@Michigan.gov) (Inspector)
- Adam Dailide: [DailideA@Michigan.gov](mailto:DailideA@Michigan.gov) (Plan Reviewer)
- Robert Stewart: [StewartR@Michigan.gov](mailto:StewartR@Michigan.gov) (Plan Reviewer)

# Objectives

- Understanding role of MRA, the local municipality (AHJ) and Bureau of Fire Services (BFS)
- Adopted codes being used by BFS plan review and inspections
- Define different types of marijuana occupancies
- Develop knowledge of marijuana processes
- Recognize hazards associated with each marijuana occupancy
- Recognize most common code violations
- Discuss how to develop a plan for inspecting local facilities

# Marijuana Regulatory Agency - MRA

- MRA – lots of info on website – [www.michigan.gov/mra](http://www.michigan.gov/mra)
- Enacted new Marijuana Rules in July 2020
- Rules consist of 10 categories
- Marijuana Operations is the one with Building Rules and BFS Rules
- Recognize hazards associated with each marijuana occupancy
- Recognize most common code violations



# Bureau of Fire Services Enforcement

- Marijuana Operations – Rule set
- 420.208, Building and Safety
- Rule 8 (4) requires BFS to perform Plan Review of certain marijuana facilities and to do semi-annual inspections of all licensed marijuana facilities



MRA notifies/informs BFS inspectors of required inspections at the following facility types:

- Provisioning Centers
- Secure Transporters
- Safety Compliance Facilities
- Temporary Marijuana Events

# PLAN REVIEW – Marijuana Unit

- Adam Dailide: [DailideA@Michigan.gov](mailto:DailideA@Michigan.gov) (Plan Reviewer)
- Robert Stewart: [StewartR@Michigan.gov](mailto:StewartR@Michigan.gov) (Plan Reviewer)

# Plan Review Basics

- Facility plans to be reviewed for Fire & Life Safety by BFS and local AHJ
  - Grow
  - Outdoor Grow
  - Processor
  - Microbusinesses
  - Designated Consumption Establishments
- Publications
  - NFPA 1, 2018
  - NFPA 101, 2018

# Plan Review Pitfalls

- Common Path of Travel
- Sprinkler System
- Separation
- Extraction Rooms
- Aisles

# Plan Review Pitfalls

- **COMMON PATH OF TRAVEL**

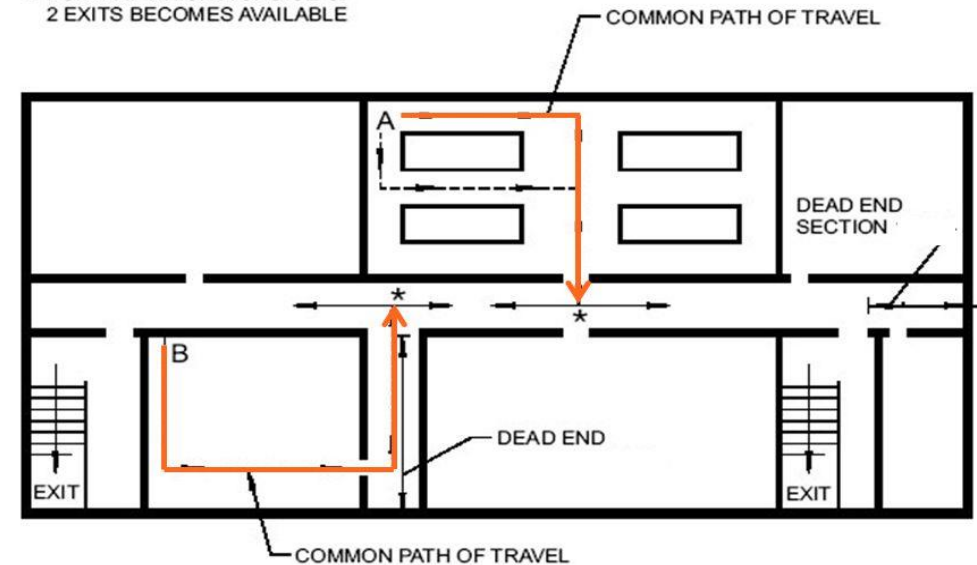
- **3.3.66 Common Path of Travel.**

The portion of exit access that must be traversed before two separate and distinct paths of travel to two exits are available.

- **Unsprinklered 50'**
    - **Sprinklered 100'**

## Common Path of Travel

★ POINT AT WHICH A CHOICE OF 2 EXITS BECOMES AVAILABLE



# Plan Review Pitfalls

- **SPRINKLERS**

- New industrial occupancies, other than low-hazard industrial occupancies, shall be protected by an approved automatic sprinkler system in accordance with NFPA 13 in any of the following locations
  - Throughout all industrial occupancies **3 or more stories in height**
  - Throughout all industrial occupancies exceeding **12,000 sq. ft. in fire area**
  - Where the total area of all floors, including mezzanines, **exceeds 24,000 sq. ft.**

# Plan Review Pitfalls

- **SEPARATION**

- The Occupancy of buildings or portions of buildings where the growing or processing of marijuana occurs shall be in accordance with Chapter 6 and the applicable building code.
  - Extraction Rooms will be considered **Industrial – Special Purpose**.
    - Separate the Extraction room with a 1-hour fire barrier using “**Separated Occupancy**”
    - Comply with the most restrictive requirements of the occupancies using “**Mixed Occupancy**”
  - Provisioning Centers are considered Mercantile and require a 2-hour separation from Industrial (Grow and Processor)



# Plan Review Pitfalls

- **EXTRACTION ROOMS**

- For other than CO2 and nonhazardous extraction process, the marijuana extraction equipment and process shall be located in a room of noncombustible construction dedicated to the extraction process and the room shall not be used for any other purpose.



# Plan Review Pitfalls

- **EXTRACTION ROOMS**

- For extraction rooms using **hazardous materials**, each room shall be provided with at least one exit access door complying with the following:
  - The door shall:
    - swing in the direction of egress travel
    - be provided with a self-closing or automatic closing device
    - be equipped with panic or fire exit hardware



# Plan Review Pitfalls

- **Aisles**
- (14.8.3.4.1.1)
  - For New Exit Access 36"
  - For Existing Exit Access 28"
- **EXCEPTION**
  - Exit Access Not more than 6 people, not exceeding 50' allows
  - 18" width @ 38" or lower
  - 28" width @ 38" or above
- NOTE: The code also says that in an existing building , Exit Access width shall not be less than 28"

# Plan Review Pitfalls

- **Aisles**

- For a NEW building,
  - aisles less than 50', room less than 6 people
    - 18" @ 38" or below (clear width with 4 ½" projection allowed each side)
    - 28" @ 38" or above (Clear Width)
  - aisles more than 50' or, room more than 6 people
    - 36" (Clear Width)
- For an Existing building,
  - aisles more/less than 50', room more/less than 6 people
    - 28" (Clear Width)



# Quiz #1

## Plan Review Question

LEARNING AND KNOWLEDGE OBJECTIVES

# Plan Review Questions



# Types of Marijuana Facilities

- Growers
- Processors
- Provisioning Centers
- Safety Compliance Facilities
- Secure Transporters
- Microbusinesses
- Designated Consumption Establishments
- Temporary Marijuana Events
- Not a BFS Marijuana Facility – Caregivers





# Grow Facilities

- Classified as a general industrial occupancy (NFPA 1, 2018)
- Required 2-hour separation from Mercantile or Business
- Plan review required by BFS and local AHJ
- Rooms broken down to different operations:
  - Flower, veg, clone, and mother rooms
- Must have Certificate of Occupancy from AHJ



# Hazards of a Grow/CO2 Enrichment

- CO2 enrichment usually less than 2000 ppm
- Can be piped in from outside bulk tank
- Portable tanks
- CO2 burners
- Supplied from building mechanical equipment



# Hazards of a Grow/CO2 Enrichment

- CO2 monitoring set at 5000 ppm
- Audio or visual alarm notification in room or area of use or storage
- NFPA 704 placarding on entrance doors to rooms and on exterior doors
- CO2 warning signs on entrance doors to grow rooms
- Auto calibrating and self-zeroing shall be prohibited
- Monitoring device located no higher than 12 inches above floor
- If cylinders are used, they need to be secured





- Exterior Bulk Storage



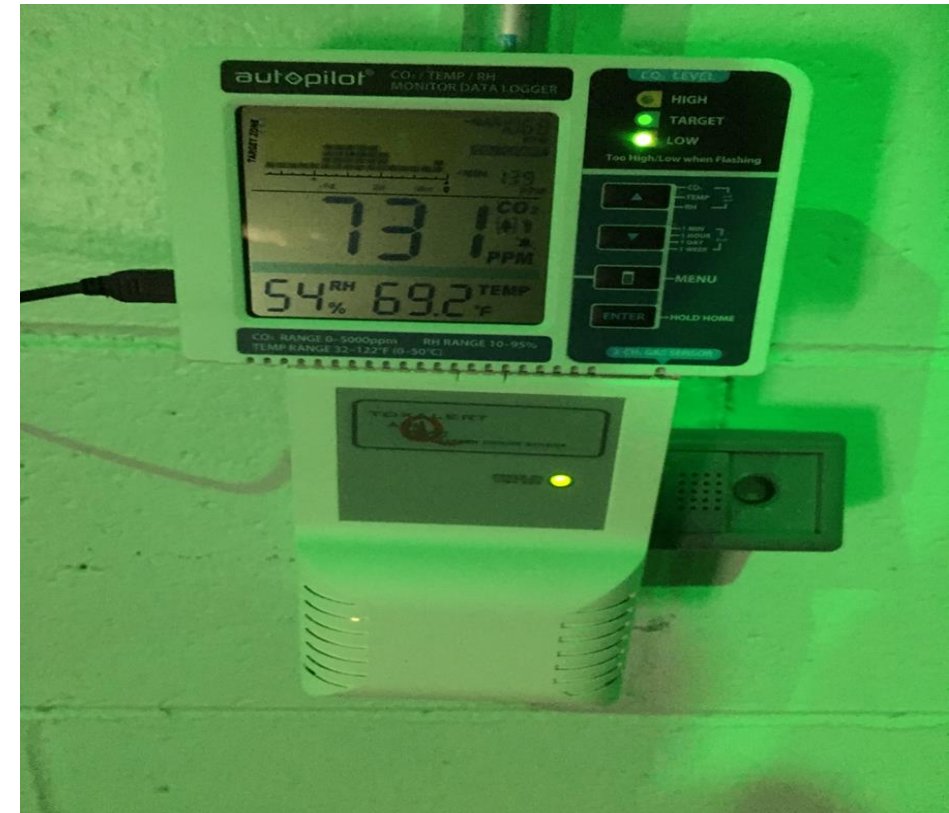
- CO2 Burner



## CO2 Generator

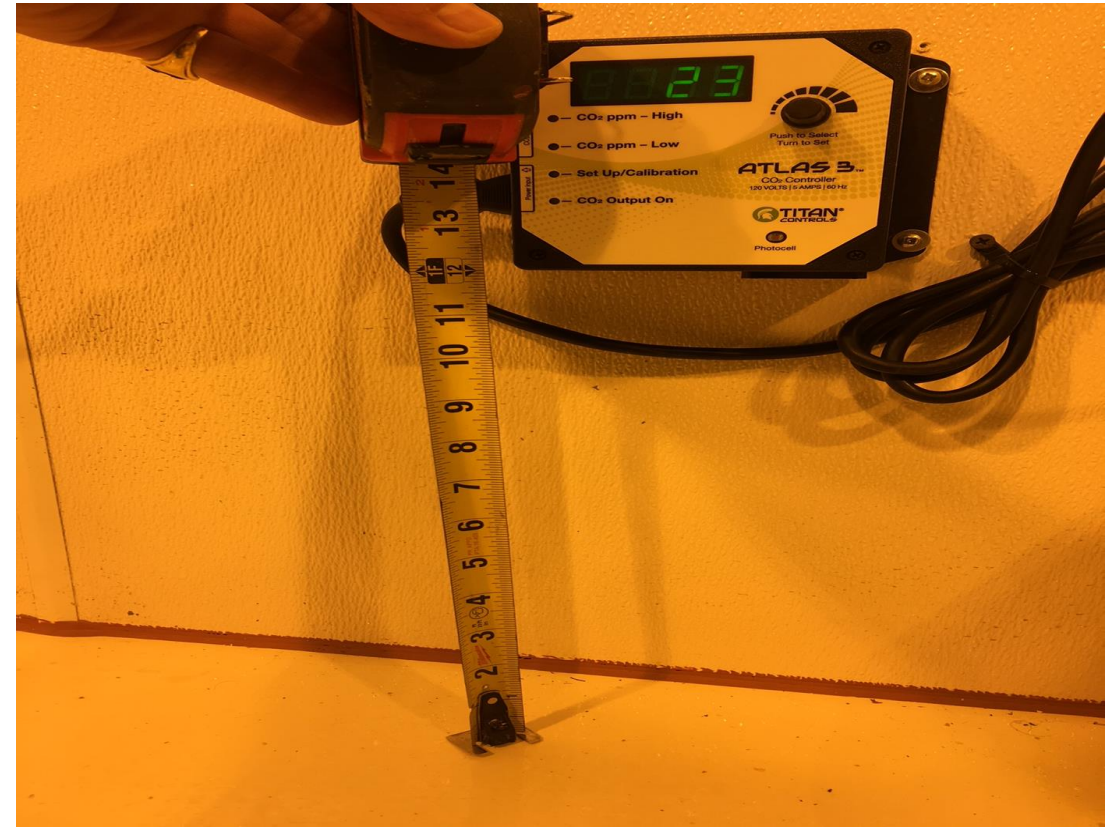
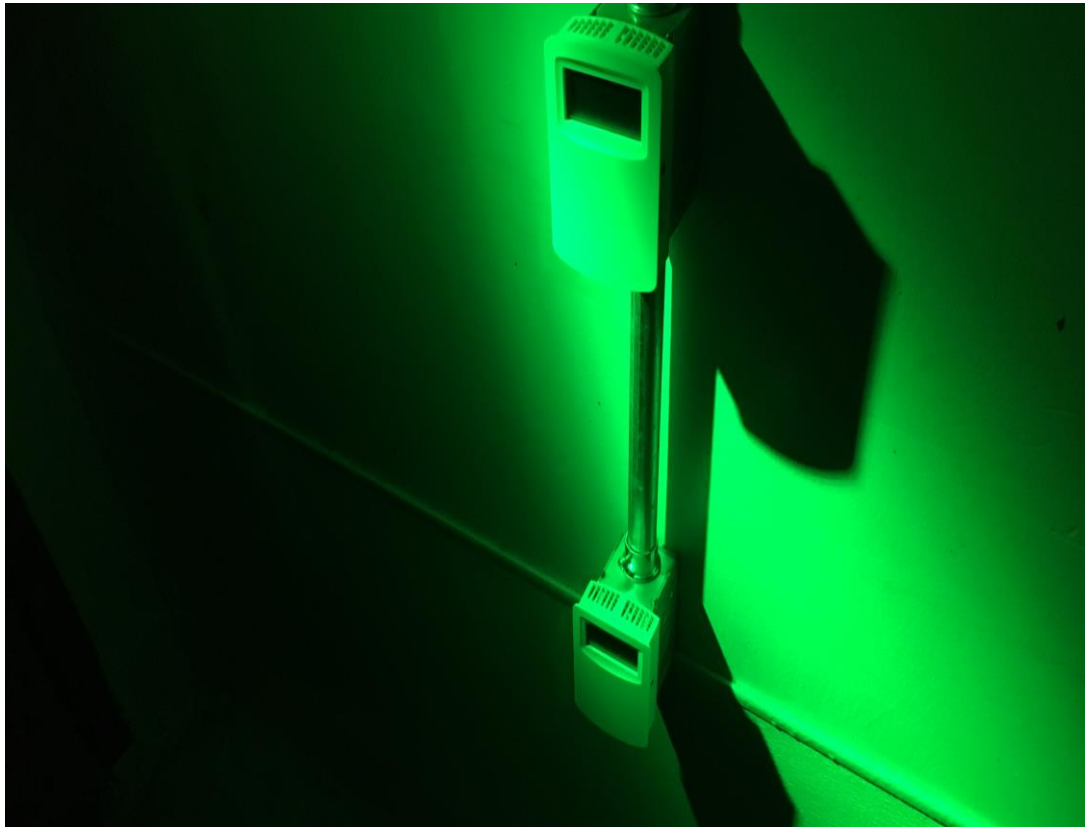


# CO2 Monitoring





# CO2 Monitoring



# More Grow Operations Concerns...

- Aisle width
- Spray on foam insulation – NFPA 286 test - intumescent paint or drywall protection
- Emergency lighting – point by point calculations (required)
- Power taps – UL-1363/1363A
- Extension cords
- Water tanks
- Light hangers
- Hazmat – fertilizers and pesticides
- Secured access
- Placards
- Fire protection systems
- Dry rooms
- Interior finish / Plastic hanging


















**FLASHING LIGHT  
MEANS CARBON  
DIOXIDE LEAK  
DETECTED –  
EVACUATE ROOM**
















# Quiz #2

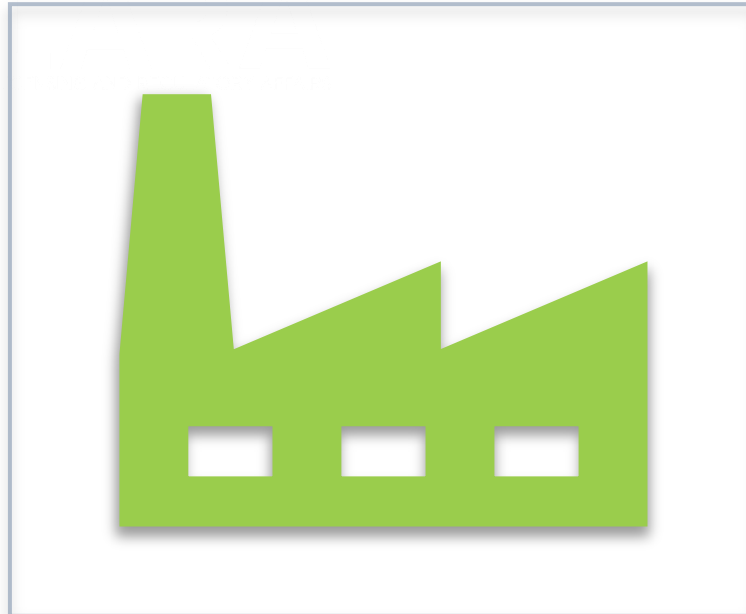
## Grow Question

# Grow Questions



# Marijuana Processing Facilities

- Classified as special industrial



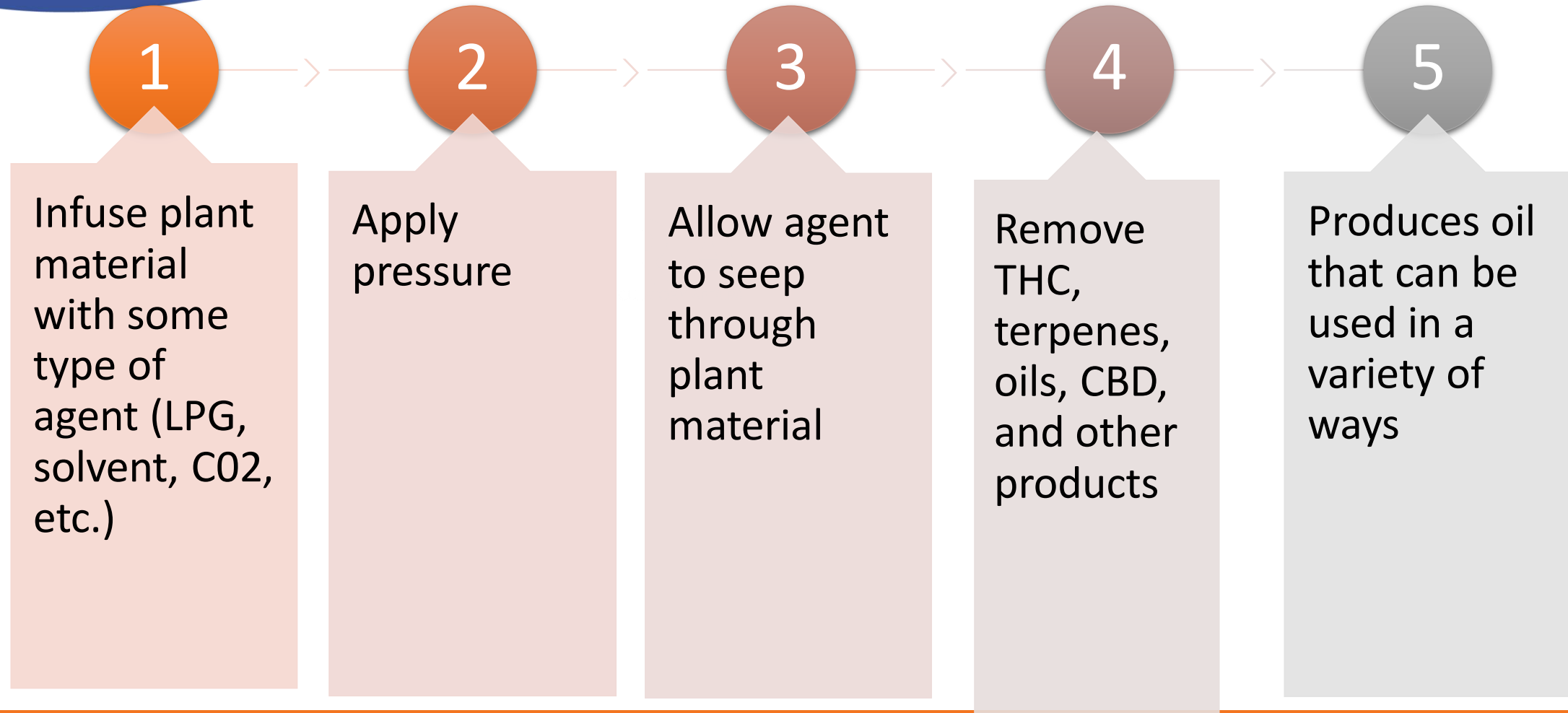


# Processing Facilities



- Extract resin or create infused products for sale
- Most hazardous area of marijuana industry
- Common extraction methods are:
  - LPG Extraction
  - Alcohol or other solvent extraction
  - CO2 extraction
  - Miscellaneous methods

# Extraction Process Basics



# LPG Extraction

- Butane & Propane are most commonly used
- Has to be done in closed loop extraction machine system
- Extraction machine has to be in C1D1 room, booth or lab hood
- Room, booth or hood shall have interlocking features
- Grounding and bonding is required
- For extraction rooms, booths or hood, BFS requires separate local electrical and mechanical AHJ approvals for classified areas, bonding and exhaust
- Shall have gas monitoring set to 25% LEL/LFL – in the booth (environment)

## LPG Extraction Continued:

- Shall have automatic suppression system in booth/hood along with duct work
- LPG containers shall not be stored in extraction rooms
- Transfilling shall take place outside
- NFPA 704 placard on entrance doors
- Shall have an automatic emergency power system installed
- Used plant material must be allowed to off gas in booth/hood











# Flammable Liquid Extraction

- Most common solvents are ethanol, methanol and isopropyl alcohol
- Closed loop system
- Conducted in Chemical Fume Hood-Chapter 7 of NFPA 45 or approved exhaust system – NFPA 91 or Mechanical Code
- Most facilities use at least a C1D2 environment
- Hood or booth have to have interlocking systems
- No fire suppression required in the environment unless building is required to be suppressed



# Flammable Liquid Extraction Continued

- Storage, use, and handling shall comply with NFPA 1, Chapter 66
- Heating of flammable or combustible liquids over open flame is prohibited
- Maximum allowable quantities
- Signage, 704 placard, no smoking, flammable liquids
- SDS – in the vicinity of the extraction process
- No flammable vapor detection system is required by NFPA 1

# CO2 Extraction

- High Pressure
- Gas detection system required set at a maximum of 5000 ppm
- Pressure relief devices piped to exterior of building
- Auto calibrating and self-zeroing detectors are prohibited
- No booth or hood requirement
- Signage, 704 placard, CO2 warning signage

# Other Extraction Processes

Rosin Press

Cold Bath/Bubble  
Hash

# Post Extraction Processes

Roto-vape (under  
hood or booth)

Ovens

Edibles (may  
require Kitchen  
Hood System)

Flammable liquid  
refrigeration


Infused soft drinks

Infused cooking  
products (oils,  
syrup, ketchup,  
butter, etc.)









# Quiz #3

## Processor Question

# Processor Questions





# Other Marijuana Facilities

- Safety Compliance Facilities
- Secure Transporters
- Provisioning Centers/Retailers
- Microbusinesses
- Consumption Establishments
- Marijuana Temporary Events

# Safety Compliance Facilities

- Classified as business
- Testing labs
- Flammable liquid storage cabinets
- Vent hoods – interlocked ventilation and power
- SDS sheets
- Flammable liquids refrigerators
- Signage, 704 placard
- UL 1363/1363A listed power taps
- General inspection practices







# Secure Transporter

- Classified as a business
- Possible inside storage of vehicles
- Security concerns
- UL 1363/1363A
- Products may be stored up to 48 hours
- General inspection practices



# Provisioning Centers

- Classified as a mercantile, providing products to card holders and authorized caregivers
- Separation may be required if attached to a processor or grow
- 2<sup>nd</sup> floor separation
- Security/roll-up doors/gates/fenced in area/vaults
- Blocked egress
- Large product and cash present
- Situational awareness
- UL 1363/1363A
- General inspection practices





# Door Security





# Door Security









SHUTTER DOORS  
SHALL REMAIN  
OPEN WHEN  
SPACE IS  
OCCUPIED



**SHUTTER DOORS  
SHALL REMAIN  
OPEN WHEN  
SPACE IS  
OCCUPIED**





# Other Facility Types

- Microbusinesses

Only 7 have gone through BFS process  
(Will require BFS Plan Review)

- Temporary Marijuana Events

- Designated Consumption Establishments

None submitted to BFS as of this date – some are in the process with MRA  
(Will require BFS Plan Review)



# Quiz #4

## Provisioning Center Question



# Other Facility Type Questions



# Caregivers – not addressed by BFS

- Caregivers and their plants are not part of BFS plan review or inspections
- Their issues are addressed at the local level
- They have limits to their allowable number of plants

# Local Authority and Local Governments

- If your municipality is going to allow marijuana facilities, then prepare documents and ordinances that will allow you to address issues that may arise
  - Zoning issues
  - Odor
  - Power grid
- If you have a concern about a suspected marijuana facility in your area, you can email MRA Enforcement at:  
[MRA-Enforcement@michigan.gov](mailto:MRA-Enforcement@michigan.gov)



# Marijuana Regulatory Agency Updates

- MRA is in the process of updating their Rules – Public Hearing is scheduled for September 27, 2021
- The proposal is to adopt the newer NFPA 1 2021 edition
- The MRA is working on a presentation for local municipalities to help address questions and concerns and will share it when it is available
- [www.michigan.gov/mra](http://www.michigan.gov/mra)

# Survey Question – MRA Facilities in your area





# QUESTIONS

Email them to [LARA-BFS-Marihuana@michigan.gov](mailto:LARA-BFS-Marihuana@michigan.gov)

